

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
11 August 2005 (11.08.2005)

PCT

(10) International Publication Number  
**WO 2005/074175 A1**

(51) International Patent Classification<sup>7</sup>: **H04B 17/00**

(21) International Application Number:  
PCT/KR2005/000254

(22) International Filing Date: 28 January 2005 (28.01.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
10-2004-0006338 30 January 2004 (30.01.2004) KR

(71) Applicants (for all designated States except US): **SK TELECOM CO., LTD.** [KR/KR]; 99, Seorin-dong, Jongro-gu, Seoul 110-110 (KR). **YONSEI UNIVERSITY** [KR/KR]; 134, Sinchon-dong, Seodaemun-gu, Seoul 120-749 (KR).

(72) Inventors; and

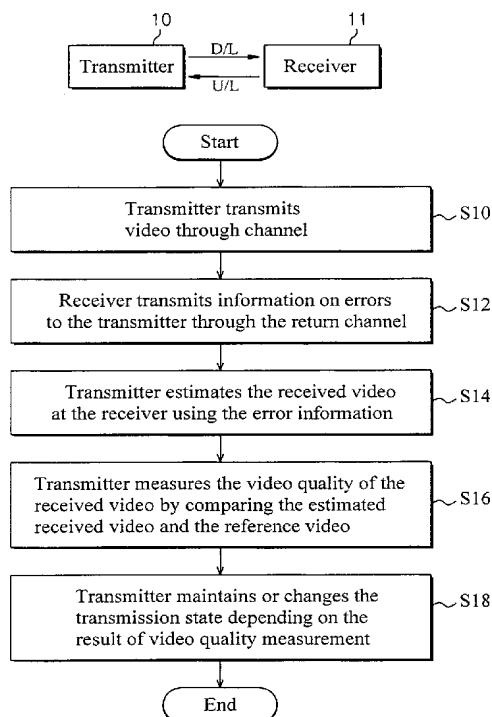
(75) Inventors/Applicants (for US only): **LEE, Chul-Hee** [KR/KR]; Department of Electrical and Electronics

Engineering, Yonsei University, 134 Sinchon-dong, Seodaemun-gu, Seoul 120-749 (KR). **RHIE, Sang-Woo** [KR/KR]; #1007-1804 Hundai 10-cha Apt., Gwangjang-dong, Gwangjin-gu, Seoul 143-210 (KR). **SULL, Won-Hee** [KR/KR]; #101-202 Samhwan Villa, 250, Gumi-dong, Bundang-gu, Seongnam-si, Gyeonggi-do 463-500 (KR). **NA, Dong-Won** [KR/KR]; #603-1009 Yanggimaoul, 29, Sunae-dong, Bundang-gu, Seongnam-si, Gyeonggi-do 463-020 (KR). **YUN, Hong-Seo** [KR/KR]; #112-1401 Samsung Pureun Apt., Jeonmin-dong, Yuseong-gu, Daejeon 305-390 (KR). **CHAE, Sang-Ho** [KR/KR]; #735-504 Jugong Apt., 49, Burim-dong, Gwacheon-si, Gyeonggi-do 427-050 (KR). **PARK, Hyun-Joong** [KR/KR]; #876-10 Bongcheon 4-dong, Gwanak-gu, Seoul 151-054 (KR). **LEE, Joong-Yun** [KR/KR]; #201, 13-61, Daehung-dong, Mapo-gu, Seoul 121-080 (KR).

(74) Agents: **KIM, Seong-Nam** et al.; 17th Floor, City Air Tower, 159-9 Samsung-dong, Gangnam-gu, Seoul 135-973 (KR).

[Continued on next page]

(54) Title: METHODS AND APPARATUSES FOR MEASURING TRANSMISSION QUALITY OF MULTIMEDIA DATA



(57) Abstract: Methods and apparatuses for measuring transmission quality of multimedia data are provided. The method comprises the steps of a transmitter transmitting multimedia data through a channel, a receiver, having received the multimedia data from the transmitter, transmitting information on transmission error of the multimedia data to the transmitter through a return channel, the transmitter estimating the received data at the receiver using the error information returned to the transmitter, and the transmitter evaluating the transmission quality of the received data by comparing the estimated received data with reference data.

WO 2005/074175 A1



(81) **Designated States** (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) **Designated States** (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),

European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

**Published:**

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*